M E M O R A N D U M

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DATE: June 20, 2013

SUBJECT: Operational Position Statement for the Week of June 18-24, 2013

The U.S. Army Corps of Engineers (USACE) is responsible for managing Lake Okeechobee water levels and makes operational decisions about whether to retain water or release water based on their regulation schedule release guidance. The USACE makes this decision taking into account the best available science and data provided by its staff and a variety of partners, which includes the South Florida Water Management District (SFWMD).

The SFWMD team has discussed the system wide environmental conditions, the water supply conditions, and has evaluated the overall status of the water management system. Detailed reports are available at the SFWMD's Operational Planning internet page.

Recommendation to the USACE

This week Part D suggests releases up to 3,000 cfs at S-79 and up to 1,170 cfs at S-80. However, since the stage is approaching the bottom of the middle third of the Low Subband, the USACE's Water Control Plan provides further guidance: S-79 up to 2,500 cfs, and S-80 up to 950 cfs. Part C of the 2008 LORS suggests up to maximum practicable releases to the WCAs if desirable or with minimum Everglades impacts.

Recent wet season rainfall generated runoff in the C-43 and C-44 basins in excess of the 2008 LORS release targets. During the past week basin runoff rates have decreased: S-79 and S-80 discharges averaged about 2,400 cfs and 637 cfs, respectively. Lake releases from S-77 and S-308, respectively, averaged about 317 cfs and 152 cfs during the past week. The USACE started a 7-day release Monday, 17-June. Target releases: average 2,500 cfs at S-79, and 950 cfs at S-308.

This week the SFWMD recommends the USACE continue to follow the 2008 LORS release guidance to manage the Lake stage. The SFWMD estuary scientists indicate that S-79 flow rates greater than 1,500 cfs may cause further damage to the Caloosahatchee Estuary if exceeded frequently. Average flow rates exceeding 2,800 cfs should be minimized since they will likely cause salinity near Shell Point to drop to levels that threaten many species in the area including oysters and seagrasses.

SFWMD scientists also suggested avoiding total inflows to the St. Lucie Estuary in excess of 2000 cfs for longer than two weeks since they will likely cause mortality of oysters. The total inflow is measured as the sum of S-80, S-49, S-97, and from Ten Mile Creek at the Gordy Road weir.

All WCA stages currently exceed their respective regulation schedules; therefore the SFWMD will continue to follow USACE release guidance and not make Lake regulatory discharges to the WCAs.

Further details are provided below, which includes optional S-79 and S-80 pulse-release patterns suggested by SFWMD estuary scientists.

Weather and Climate
Rainfall during the past week totaled 1.11 inches district wide (through 7 am June 18th). About 0.45 inches of rain fell directly over Lake Okeechobee during the past 7-days. District-wide rainfall for the past

30 days totaled 9.76 inches, which was 55% above-average. The combined Upper and Lower Kissimmee Basins received averaged about 1.2 inches of rain during the past week. For the past 30-days the upper basin received about 76% above-average, while the lower basin received about 40% above-average rain.

The SFWMD short-term weather forecast indicates below-average rainfall for the next week. Near-average rainfall is expected the following week. The available (31-May) Climate Prediction Center (CPC) outlook for June shows increased chances of above-normal rainfall. For the three-month windows through the 2013 wet season, the available CPC outlook (16-May) also shows equal chances of above-normal, normal, and below-normal rainfall for central and southern Florida.

Current Conditions and Operations

The June 17, 2013 Lake Okeechobee stage (reported by the USACE on June 18th) was 13.91 feet NGVD, 0.04 feet higher than last week. The Lake stage is 0.5 feet lower than it was a month ago and is about 2.1 feet higher than it was a year ago. The current stage is 0.72 feet above the historical average for this date. The stage is within the middle third of the Low Sub-band of the 2008 Lake Okeechobee Regulation Schedule (2008 LORS) and is receeding after peaking during the past week. The current stage is about 0.74 feet above the top of the Baseflow Sub-band and about 1.22 feet below the Intermediate Sub-band.

Dry Season Water Supply releases from Lake O to the EAA ended with the sustained rain starting in late May. Water Supply releases from the WCAs to the lower east coast also ceased; however releases continue to relieve high water levels in the WCAs. Regulation discharges through S-39, S-38, and S-31 are being made when downstream capacity is available while WCA-1, WCA-2A, and WCA-3A stages are above their respective regulation schedules. Releases from C-10A were made for most of the dry season, however they are reducing as the runoff into the L-8 Canal increases. A large portion of the C-10A releases were used for the water supply needs of the L-8 Basin, the City of West Palm Beach via the M-Canal, and the Lake Worth Drainage District via S-5AE and S-155A. As the rainfall increased in May and June, water supply demands reduced and excess water was discharged to tide via S5AE, S1-55A, and S-155. The SFWMD continues to discharge water from the southern end of the L-8 Canal (S-5AE/S5AW) to provide a dilution flow for water discharge by the Design Build Contractor (Archer Western) for the L-8 Flow Equalization Basin (FEB) {inflow structure, outflow structure and revetment}.

2008 LORS Release Guidance (Part C): This week Part C suggests “Releases to the WCAs if desirable or with minimum Everglades impacts”. The Tributary Hydrologic Condition (THC) increased to the very wet classification. The THC is determined by the wetter of the Palmer Index and the Lake O Net Inflow. The Lake O Net Inflow has risen into the very wet class this week, and the Palmer Index remains in the near-normal classification.

All WCA stages currently exceed their respective regulation schedules. WCA-3A water levels rose above the top of its regulation schedule in late May (Zone A), therefore the SFWMD discontinued Lake O regulatory discharges to WCA-3A per USACE guidance.

Note that so far in 2013, Part C has suggested Lake regulatory discharges to the WCAs for 16 of 24 weeks, including this week. Dry tributary hydrologic conditions was the reason the LORS suggested no southward releases for 8 of the 24 weeks (March & April). Lake O regulatory discharges to the WCAs were made during 10 of the 16 weeks that were suggested by the LORS. Southward Lake O regulatory discharges were not made for 6 of the 16 weeks due to unavailable conveyance capacity in the primary EAA canals and/or high water levels in the WCAs. STA treatment capacity concerns limited the flow rates to 200-250 cfs when releases were made, but portions of STA-2 and STA-3/4 were available when needed.

System conditions continue to be monitored closely. Lake O regulatory discharges to WCA-3A will resume per Part C guidance when the WCA-3A stage recedes below Zone A and when conveyance and STA treatment capacities are available.

2008 LORS Release Guidance (Part D): This week Part D suggests releases up to 3000 cfs at S-79 and up to 1170 cfs at S-80. However, since the Lake stage is within the middle third of the Low Subband, page 7-15 of the Water Control Plan for Lake Okeechobee and the EAA indicates the target discharges are up to 2500 cfs at S-79 and up to 950 cfs at S-80.

SFWMD estuary scientists state that, given the amount of freshwater inflow from basin runoff to the St. Lucie Estuary, it does not need supplemental inflows. They further state that total surface water inflows (S-80 plus S-49 on C-24, S-97 on C-23, and from Ten Mile Creek at the Gordy Road weir) exceeding 2,000 cfs for more than two weeks will likely cause mortality of oysters.

For the Caloosahatchee Estuary, SFWMD estuary scientists recommend that, since the wet season has begun and the estuary typically receives increasing levels of freshwater inputs, the average flow rate can increase up to 1,500 cfs in a pulsed release from S-79. However, the average flow rate should not exceed 1,500 cfs frequently. Average flows that exceed 2,800 cfs should be minimized because flows greater than this cause salinity near Shell Point to drop to levels that threaten many species in the area including oysters and seagrasses.

Suggested alternative release patterns are provided here. Note the potential effects from high discharges described above.

	S-79	S-79	S-79	S-80	S-80	S-80
Day	1500 cfs	2500 cfs	3000 cfs	950 cfs	1170 cfs	1170cfs
1	2100	2000	2500	1500	1800	1500
2	2700	3500	4000	2000	2400	2190
3	2300	4500	4500	1800	1500	1500
4	2000	3500	4000	1200	1000	1000
5	1700	2500	3000	900	900	1000
6	1400	1000	2000	700	600	500
7	1100	500	1000	500	600	500
8	800			500	600	
9	600			400	400	
10	300			0	400	

SFWMD Lake Okeechobee Adaptive Protocol (AP) Release Guidance: This week the SFWMD's Lake Okeechobee Adaptive Protocol (AP) release guidance flowchart is not applicable since the 2008 LORS release guidance suggests releases higher than baseflow releases.

Note that the AP release guidance flowchart was designed primarily to guide release recommendations for circumstances when the Lake stage is within the Baseflow Subband or lower. The USACE's Water Control Plan (WCP) for Lake Okeechobee and the EAA recognizes that the SFWMD may allocate water to the environment through its "Adaptive Protocols" or other SFWMD authorities. The WCP provides guidance as to releases, including Adaptive Protocol recommendations, in the various Lake schedule subbands.

There are two primary branches of the AP release guidance flowchart. The upper branch pertains to the 2008 LORS baseflow (aka, regulatory) releases while the lower branch pertains to environmental water supply releases. It is important to recognize that the AP was developed primarily to guide the water supply balance between Caloosahatchee Estuary, permitted water users, and other water supply purposes of the water control system. The water supply balance achieved by following the AP release guidance was evaluated by the Water Resources Advisory Commission and the SFWMD Governing Board, leading to board acceptance in September, 2010. Final Adaptive Protocols for Lake Okeechobee Operations (September 16, 2010).

For additional information pertaining to operations history and past recommendations, refer to the archives of LORS-2008 Release Guidance outcomes and operational position statements at www.sfwmd.gov under the Operational Planning topic.